

## Additional file 2. Streaming

Author Year, reference Country Journal	Study design	Size of emergency dept Admission rate	Intervention (I) Control (C)	Outcome	Results Intervention (I) Control (C) Difference (D)	Study quality and relevance Comments
Kelly AM et al 2007 [37] Australia	Observational study Prospective vs retrospective control One year before and one year after intervention.	32 000/year Admission rate 23%	I: Streaming into two processes (admission and discharge). Separate teams with senior emergency physician in each N=31 500  C: No streaming and mixed patients N=31 500	WT (NTS 3)  WT (NTS 5)  LOS (NTS 3)  LOS (NTS 4)  LOS (NTS 5)  Admitted within 4 hours  Discharged within 4 hours	I: 9 minutes C: 14 minutes D: 5 minutes p<0.005  I: 45 minutes C: 56 minutes D: 11 minutes p<0.005  I: 290 minutes C: 283 minutes D: - 7 minutes p<0.02  I: 199 minutes C: 213 minutes D: 14 minutes p<0.005  I: 115 minutes C: 133 minutes D: 18 minutes p<0.005  I: 73% C: 54%  I: 92% C: 83%	Moderate  Shorter WT for NTS 3 and 5 with streaming.  Shorter LOS for NTS 4 and 5 with streaming  More patients to ward or discharged within 4 hours with streaming
King DL et al 2006 [38] Australia	Observational study Prospective vs retrospective control	50 000/year Admission rate 43%	I: Streaming to discharge or admission A- and B-team + resuscitation team N=50 337	WT to see doctor (all)	I: 86 minutes C: 86 minutes D: 0 NS	Moderate  Shorter LOS for admitted as well as discharged patients but no increase in patients seen

	<p>Twelve months before and 12 months after intervention.</p> <p>All patients seen by triage nurse</p>		<p>C: No streaming N=49 075</p>	<p>LOS (all)</p> <p>LOS (admitted patients)</p> <p>LOS (discharged patients)</p> <p>Mortality</p> <p>LWBS</p> <p>LOS&lt;4 hours</p>	<p>I: 5.0 hours C: 5.8 hours D: 0.8 hours (=48 min) p&lt;0.001</p> <p>I: 7.0 hours C: 8.5 hours p&lt;0.001</p> <p>I: 3.4 hours C: 3.7 hours p&lt;0.001</p> <p>I: 0.11% C: 0.10% NS</p> <p>I: 3.2% C: 5.5% p&lt;0.001</p> <p>I: 53% C: 48% p&lt;0.001</p>	<p>within ATS threshold times with streaming</p>
<p>Patel PB et al 2005 [39] USA</p>	<p>Observational study Prospective vs retrospective control One year before and one year after intervention.</p>	<p>39 000/year</p>	<p>I: Streaming to teams with 1 emergency physician, 2 nurses and 1 technician Same patients to all teams N=39 301</p> <p>C: No streaming N=38 716</p>	<p>WT</p> <p>LWBS</p> <p>Patient satisfaction</p>	<p>I: 61.8 minutes C: 71.3 minutes D: 9.5 minutes 95% CI = 5.8–13.5 minutes</p> <p>I: 1.6% C: 2.3% Diff = 0.8 with 95% CI = 0.4–1.1%</p> <p>I: Increase</p>	<p>Moderate</p> <p>Shorter WT and fewer LWBS with streaming</p> <p>Increased patient satisfaction</p> <p>Very high numbers</p>

WT = waiting time; LOS = length of stay; LWBS = left without being seen; NS = non significant; CI = confidence interval; ATS = Australasian Triage System; NTS = National Triage Scale